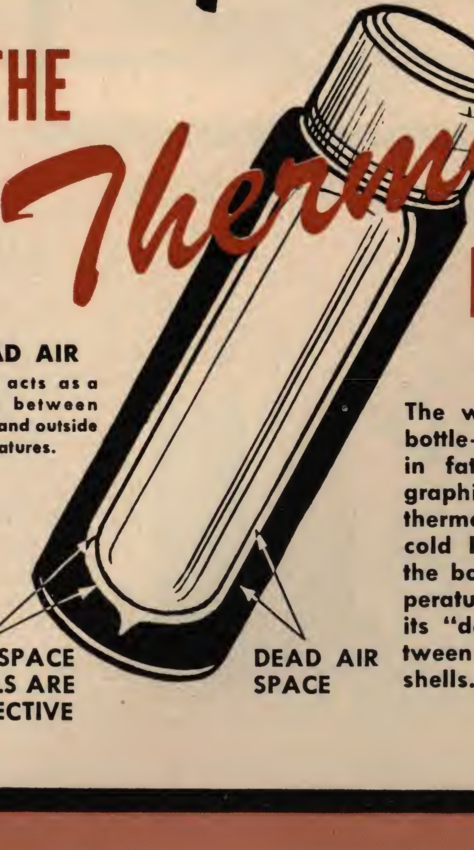
AIR-O-CEL*
VAPOR BARRIER
Reflective
INSULATION BOARD

Plus

THE Thermal PRINCIPLE


DEAD AIR
space acts as a buffer between inside and outside temperatures.
AIR SPACE WALLS ARE REFLECTIVE
DEAD AIR SPACE

The well-known vacuum bottle—the same as found in father's lunch box—graphically illustrates the thermal principle. Hot or cold liquids poured into the bottle hold their temperatures for hours due to its "dead air" space between inner and outer shells.

The only board that combines Reflective Thermal Insulation with a Positive Vapor Barrier

"IF IT'S INSULATION...IT'S AIR CELLS"

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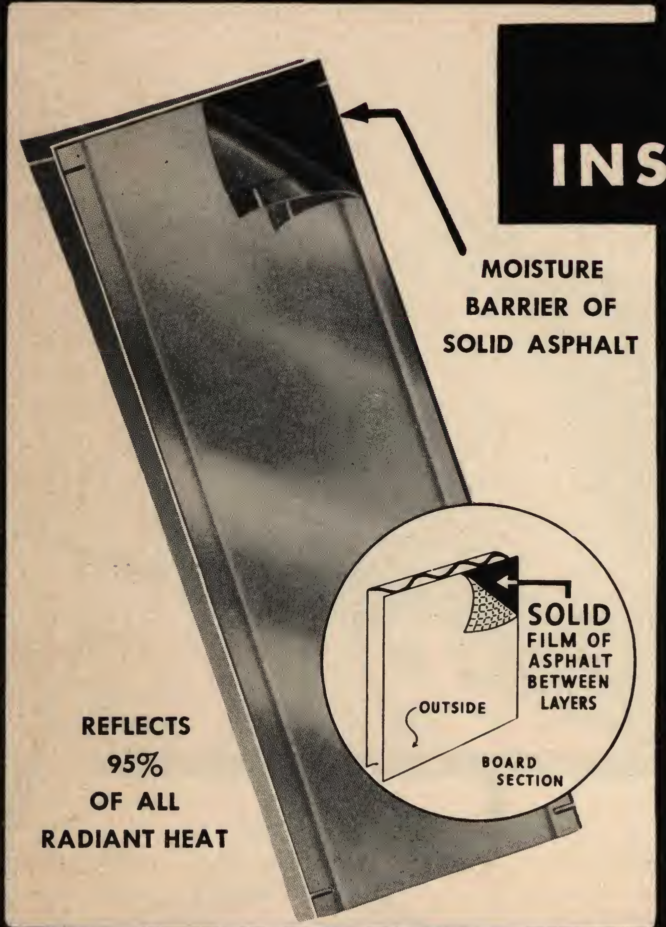
AIR-O-CEL "Vapor Barrier"

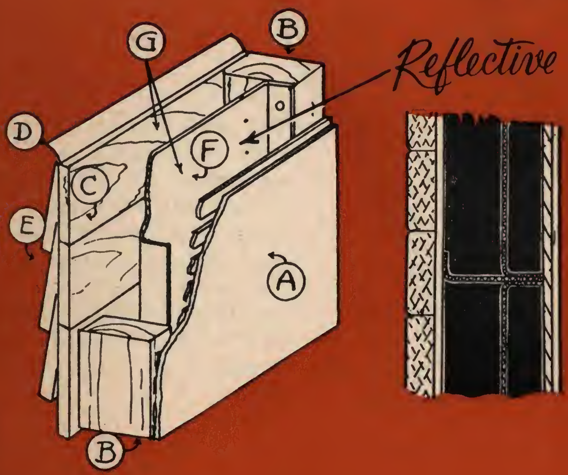


GIVES MAXIMUM INSULATION EFFICIENCY

SOLID ASPHALT FILM BETWEEN LAYERS PROVIDES A POSITIVE VAPOR BARRIER

Air-O-Cel Reflective Insulation Board is an asphalt saturated, corrugated board of the wood fiber base type, with a sheet of heavy, highly reflective mineralized surface, laminated to its face. It is the one board that honestly provides a positive vapor barrier—a heavy, solid and unbroken film of asphalt between the asphalt saturated board and the laminated reflective surface. Properly installed, Air-O-Cel board offers the closest to a perfect thermal insulation possible, for it forms a dead air buffer between interior and exterior temperatures—the oldest and only efficient insulation principle known. Combine this feature with Air-O-Cel's positive vapor barrier construction and you have an insulation material that cannot be matched for all around insulation efficiency.

AIR-O-CEL MAKES A *THERMAL UNIT* OF THE ROOF, WALL OR CEILING

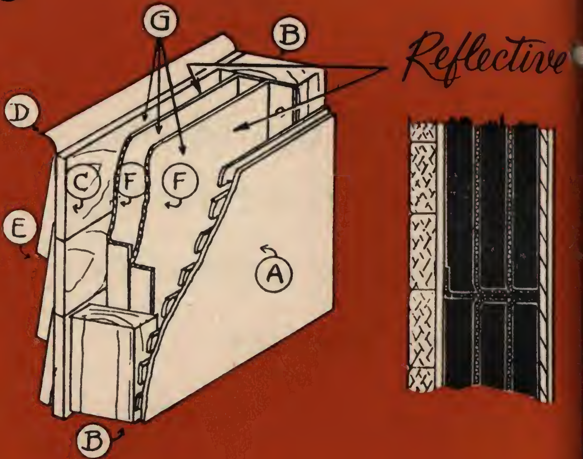


WALL INSULATED WITH SINGLE AIR-O-CEL INSTALLATION

Illustration of single Air-O-Cel installation between inner and outer walls. Note the double thermal spaces and how Air-O-Cel acts as a vapor barrier between the inner and outer walls.

Air-O-Cel Vapor Barrier Reflective Insulation Board when installed between studs, joists or rafters, forms an air tight, thermal pocket of motionless air. Moving air (convection) transfers heat faster. Dead air in the Air-O-Cel thermal pocket retards the heat flow. Reflective surface adds to the efficiency by reflecting 95% of the heat rays—a perfect thermal unit—the same as a vacuum bottle.

A. Wood Lath and Plaster
B. Studding
C. Sheathing
D. Building Paper
E. Lap Siding
F. Air-O-Cel Reflective Insulation Board
G. Air-O-Cel Thermal Spaces



WALL INSULATED WITH DOUBLE AIR-O-CEL INSTALLATION

Two layers of Air-O-Cel Reflective Insulation Board installed between the walls, gives triple the insulation efficiency with three, always uniform, thermal spaces. With the reflective surface of the outer board facing the exterior and the reflective surface of the inner board facing the interior, top efficiency is gained for both winter and summer insulation.

"GOOD BUILDINGS DESERVE GOOD INSULATION,

Reflective INSULATION BOARD

CANNOT SAG, SETTLE, FALL OR SOAK UP MOISTURE

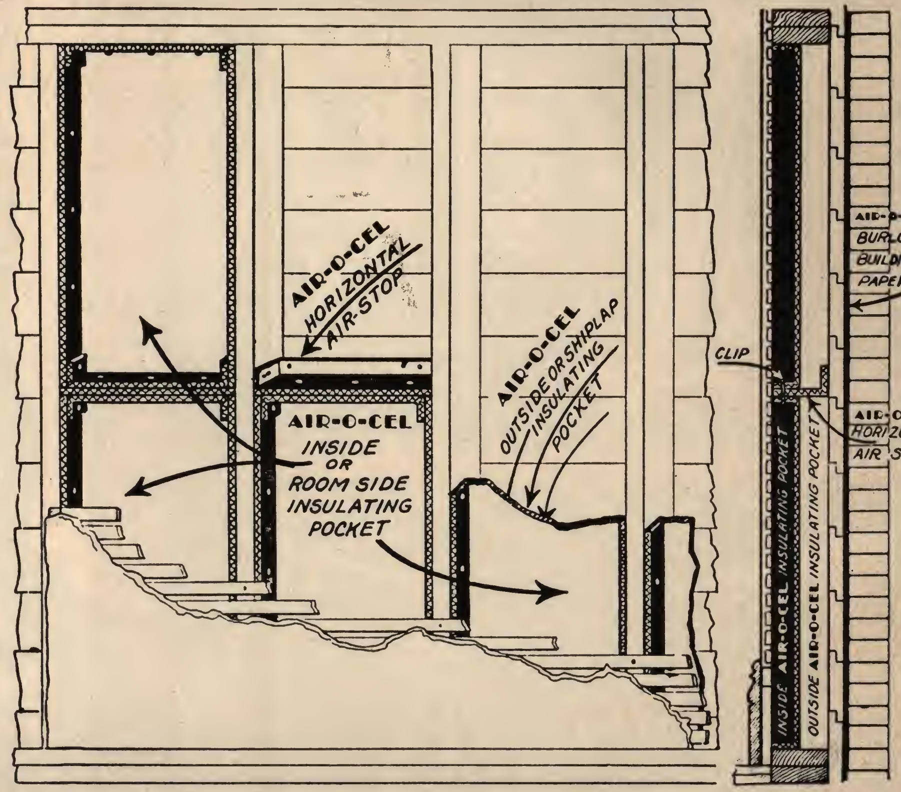
Air-O-Cel Vapor Barrier Reflective Insulation Board is tough, rigid and durable—it cannot settle, sag or fall. Once installed, it stays put and provides the maximum in dependable insulation for the life of the building.

Since Air-O-Cel Reflective Insulation Board is thoroughly saturated with asphalt and carries a solid film of asphalt between its layers, it is a positive moisture resistant—it cannot soak up moisture or lose its rigidity.

ELECTRICAL CONDUCTIVITY is same as DRY wood. Does not affect radio waves.

SURPASSES F. H. A. SPECIFICATION NO. 771

F. H. A. Specification No. 771 calls for a vapor barrier in all frame walls of conventional or similar construction where insulation is added within the stud spaces. Air-O-Cel Backer Board meets and surpasses all requirements of Specification No. 771 by more than 60% (Tappi Method). Write for copy of laboratory reports that prove that fact—There's no obligation.


AIR-O-CEL HORIZONTAL AIR-STOP
AIR-O-CEL OUTSIDE OR SHIPLAP INSULATING POCKET
AIR-O-CEL INSIDE OR ROOM SIDE INSULATING POCKET
AIR-O-CEL BURLOID BUILDING PAPER
CLIP
AIR-O-CEL HORIZONTAL AIR STOP
INSIDE AIR-O-CEL INSULATING POCKET
OUTSIDE AIR-O-CEL INSULATING POCKET

HEAT LOSS CO-EFFICIENTS

t transmission figures calculated as recommended by
1945 Guide of the American Society of Heating and
tilating Engineers. Hot plate test by J. C. Peebles of
Armour Institute of Technology.

ues expressed in BTU per hour per Sq. Ft. per degree
erence in temperature between air on 2 sides outside
d velocity 15 Mph.

NGS

ical-Wood Joists (2' x 6"), Rock Lath Plaster.
lective surface must face interior.

	Attic not floored	Attic floored
Insulation	.61	.28
hickness AIR-O-CEL Reflective ingle air space) 60% reduction in te of heat flow	.13	.10
hickness AIR-O-CEL Reflective ouble air space)	.07	.06

LLS

ical-Wood Sheathing (2' x 4") Studs, Rock Lath, ter. Reflective surface must face interior.

Exterior Wall	Wood Siding	Wood Shingle	Stucco	Brick
nsulation	.25	.25	.30	.29
hickness AIR-O-CEL eflective (Double air ace) 70% reduction	.10	.10	.12	.11
hickness AIR-O-CEL eflective (Triple air ace)	.07	.07	.08	.08

FS

ical-Wood Rafters (2' x 6"), Rock Lath, Plaster Ceil-
Lower Side. Reflective surface must face roof boards.

	Wood Shingles or wood roof board	Asphalt or roll roofing on solid wood roof board
nsulation	.29	.31
O-CEL Reflective rd (1½" air space)	.11	.12

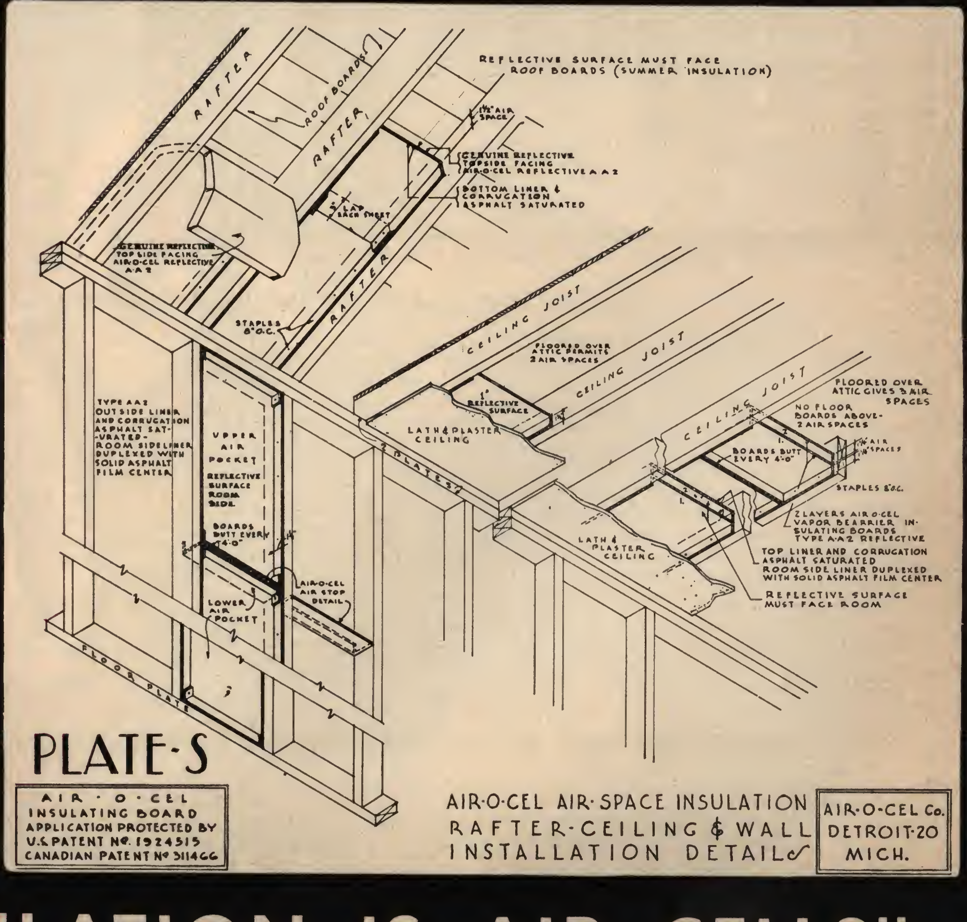

RAFTER
ROOF BOARDS
RAFTER
RAFTER
REFLECTIVE SURFACE MUST FACE ROOF BOARDS (SUMMER INSULATION)
1½" AIR SPACE
GENUINE REFLECTIVE TOPSIDE FACING AIR-O-CEL REFLECTIVE A A 2
BOTTOM LINER & CORRUGATION ASPHALT SATURATED
½" LAP EACH SHEET
GENUINE REFLECTIVE TOP SIDE FACING AIR-O-CEL REFLECTIVE A A 2
STAPLES 8" O.C.
CEILING JOIST
CEILING JOIST
CEILING JOIST
FLOORED OVER ATTIC PERMITS 2 AIR SPACES
1" REFLECTIVE SURFACE
LATH & PLASTER CEILING
FLOORED OVER ATTIC GIVES 3 AIR SPACES
NO FLOOR BOARDS ABOVE-2 AIR SPACES
BOARDS BUTT EVERY 4'-0"
AIR SPACES
STAPLES 8" O.C.
2 LAYERS AIR-O-CEL VAPOR BEARRIER INSULATING BOARDS TYPE A-A2 REFLECTIVE
TOP LINER AND CORRUGATION ASPHALT SATURATED ROOM SIDE LINER DUPLEXED WITH SOLID ASPHALT FILM CENTER
REFLECTIVE SURFACE MUST FACE ROOM
LATH & PLASTER CEILING
2 PLATES
TYPE AA2 OUTSIDE LINER AND CORRUGATION ASPHALT SATURATED - ROOM SIDELINER DUPLEXED WITH SOLID ASPHALT FILM CENTER
UPPER AIR POCKET
REFLECTIVE SURFACE ROOM SIDE
BOARDS BUTT EVERY 4'-0"
AIR-O-CEL AIR STOP DETAIL
LOWER AIR POCKET
FLOOR PLATE

PLATE-S

AIR-O-CEL
INSULATING BOARD
APPLICATION PROTECTED BY
U.S. PATENT No. 1924515
CANADIAN PATENT No 311466

AIR-O-CEL AIR-SPACE INSULATION
RAFTER-CEILING & WALL
INSTALLATION DETAILS

AIR-O-CEL Co.
DETROIT-20
MICH.

GOOD INSULATION IS AIR CELLS"

AIR-O-CEL "VAPOR-BARRIER" *Reflective* INSULATION BOARD

QUICK and EASY TO INSTALL

Air-O-Cel Vapor Barrier Reflective Insulation Board is shipped from the factory, in easy to handle sheets, pre-cut to fit between all standard studding, joists or rafters. Board can be easily cut with a linoleum knife for installation in off-standard areas. Board may be fastened in place with flat headed rock lath or roofing nails. Wire staples and stapling machines may be used for speedier installation. Air-O-Cel Reflective Board is simple to install. High priced labor is not needed.

SIZES

17″ x 51″ flanged and slotted—25 sheets—150 sq. ft. wrapped:—16″ O. C. and under.

25″ x 51″ flanged and slotted—25 sheets—225 sq. ft. wrapped:—24″ O. C. and under

36″ x 48″—flat sheets—25 sheets—300 sq. ft.

Special Sizes Available

SOLID MASONRY and BLOCK WALLS

Air-O-Cel Vapor Barrier Reflective Insulation Board applied against a masonry or block wall with the reflective surface facing the interior reduces the high heat flow by 60% and stops moisture penetration. Furring strips applied over the Air-O-Cel board, holds it permanently in place and provides an air space between the lath and the reflective surface of the board. The asphalt film between the layers of the Air-O-Cel board provides a positive vapor barrier and damp-proofs the wall. Air-O-Cel Board is applied by the carpenter.

THERMAL AIR-SPACE TYPE INSULATION—RECOMMENDED SPECIFICATIONS

EXTERIOR WALLS • AIR-O-CEL REFLECTIVE VAPOR-BARRIER Insulating Board (Type AA2) shall be installed in exterior walls with flanges bent and edge of flanges to be set flush with inner line of studs. AIR-O-CEL air stops to be installed at line of horizontal flange, dividing upper and lower sections. AIR-O-CEL air-stop to be full depth of stud. Nail flanges securely to side of stud with ½″ wire staples placed not more than 18″ apart. Beam fill with AIR-O-CEL AA2 REFLECTIVE Board between all floors exposed to heated area. All exterior walls adjacent to occupied quarters shall be insulated. Fill all irregular interstices with Wool, particularly around all windows and doors, between rough opening and frame. Reflective surface must face interior of occupied quarters.

CEILINGS • AIR-O-CEL REFLECTIVE VAPOR-BARRIER Insulating Board (Type AA2) to be installed with outer edge of flange flush with bottom edge of ceiling joist. Abutting side of flange shall be tight. All ceilings exposed to attic space shall be insulated. When portion of ceiling is exposed to attic and remaining ceiling portions are under finished rooms provide AIR-O-CEL Vapor-Seal Board, vertical air stop set on a line with walls of rooms above and being the full depth of the joist. Ceiling cut-off or slope to be considered as ceiling. Reflective surface to face room of occupied quarters.

RAFTERS • All roof areas to be covered with AIR-O-CEL REFLECTIVE VAPOR-BARRIER Board (Type AA2). The board shall be installed between rafters with flanges bent and side of flange stapled securely to side of rafter with ½″ wire staples placed not more than 12″ apart. The reflective surface shall face roof board with an air space of not more than 1½″ from roof boards. The board shall be end-lapped not less than 6″.

NOTE:

FOR WINTER INSULATION: Reflective surface to face room of heated occupied quarters: as close as possible to point of occupied quarters which are heated.

FOR SUMMER INSULATION: Reflective surface to face roof boards: as close as possible to point of entry.

WRITE FOR TEST DATA, FREE MONTHLY BULLETIN and other FREE INFORMATION

AIR-O-CEL COMPANY

22000 WOODWARD • DETROIT 20, MICHIGAN

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